

WHAT IS CLAIMED IS:

- 1           1. A patient care and communication system which  
comprises:
- a central station having means for facilitating  
visual and data communications relating to patient care; and
- 5           a plurality of remote stations linked to said  
central station and having a processor for facilitating  
visual and data communications relating to patient care and  
having a display for displaying said visual communications;  
and
- 10          a private branch exchange connected to a telephone  
exchange and to a plurality of telephones for facilitating  
telephone communication between said telephones and said  
exchange;
- wherein said central station facilitates said
- 15          visual and data communications between said plurality of  
remote stations, and includes means for determining which of  
said plurality of remote stations are transmitting said  
visual and data communications and which of said plurality  
of remote stations are to receive said visual and data
- 20          communications, and includes means for establishing a  
communication link between said transmitting stations and  
said receiving stations;
- wherein each of said plurality of remote stations  
includes telephone circuitry connected to said private-
- 25          branch exchange for telephone communications therebetween.
2. The patient care and communication system;  
according to claim 1, wherein said plurality of remote  
stations includes control stations and patient stations.
- 30          3. The patient care and communication system  
according to claim 2, wherein said plurality of remote  
stations includes staff stations.

4. The patient care and communication system  
1 according to claim 1, wherein at least a portion of said  
plurality of remote stations are configured and adapted for  
association in a group network such that predefined visual  
and data signal communications are transmitted to each  
5 station in the group by said central station and audio  
communications are transmitted by said private-branch  
exchange.

5. The patient care and communication system  
according to claim 3, wherein said central station includes  
10 means for directing said private-branch exchange to  
establish audio communication between a predetermined number  
of said control stations and a predetermined number of said  
patient stations and a predetermined number of said staff  
stations.

6. The patient care and communication system  
according to claim 1 further comprising zone controller  
means for interfacing said central station to said  
transmitting and receiving stations for data communications  
therebetween.

7. The patient care and communication system  
according to claim 2, wherein said patient stations include  
patient control means connected thereto, said patient  
control means including a keypad, a speaker and a microphone  
20 for telephone communications.

8. The patient care and communication system  
according to claim 2, wherein said central station includes  
means for directing said private-exchange to activate audio  
communications between said control stations and a  
predetermined number of said patient stations to facilitate  
30 audio monitoring of patient rooms from said control  
stations.

9. The patient care and communication system  
1 according to claim 2, wherein said control stations comprise  
a microprocessor for controlling the operation of said  
control stations and said PBX interface means, memory means  
connected to said microprocessor for storing programs and  
5 data, peripheral interface means for interfacing said  
microprocessor to peripheral equipment so as to facilitate  
the input and output of said visual and data signal  
communications.

10 10. The patient care and communication system  
according to claim 2 further comprising locating means  
linked to said central station for determining the location  
of staff members and transferring said staff location data  
to said central station so as to facilitate visual and data  
communications between said control stations and said  
15 patient stations provided at the detected location of the  
staff members, said central station directing said private-  
branch exchange to activate audio communication between said  
control stations and said patient station at said detected  
location.

20 11. The patient care and communication system  
according to claim 1, wherein said plurality of remote  
stations include receivers adapted to receive and convert  
infrared transmissions to electrical signals.

25 12. The patient care and communication system  
according to claim 11 further comprising a portable  
transmitter adapted to be releasably attached to an object,  
said transmitter being adapted for infrared transmission.

30 13. The patient care and communication system  
according to claim 12 wherein said portable transmitter  
includes a housing and a processor within said housing.

14. The patient care and communication system  
1 according to claim 13 wherein said portable transmitter  
includes a patient select member connected to said processor  
to permit persons within a room to control environmental  
facilities within the room.

5 15. The patient care and communication system  
according to claim 12 wherein said portable transmitter  
transmits data substantially periodically to said remote  
stations so as to provide said central station with  
information reflecting the status of said portable  
10 transmitter.

16. The patient care and communication system  
according to claim 15, wherein said status information  
includes a message that the portable transmitter is  
operational.

15 17. The patient care and communication system  
according to claim 15, wherein said status information  
includes battery charge data.

18. The patient care and communication system  
20 according to claim 13, wherein said housing includes a slot  
configured to receive a personnel card, said housing having  
at least one electrical contact connected to said processor  
and said personnel card having at least one electrical  
contact engagable with said at least one housing contact to  
permit the transmission of data between said personnel card  
25 and said processor.

19. The patient care and communication system;  
according to claim 18, wherein said personnel card includes  
an identifier circuit which transfers validation data to  
30 said processor, wherein said processor determines if the  
validation code is valid so as to activate said transmitter  
and permit the person in possession of said card to use said  
portable transmitter.

20. A patient care and communication system which  
1 comprises:

a central station having a processor for  
facilitating visual and data signal communications relating  
to patient care;

5 a private-branch exchange coupled to said central  
station;

at least one patient station having a processor  
which facilitates visual and data signal communications  
relating to patient care, a display to display text received  
10 from said data signal communications and telephone circuitry  
coupled to said private-branch exchange for telephone  
communications between stations; and

at least one control station having a processor  
which facilitates visual and data signal communications  
relating to patient care, a display for displaying text  
15 received from said data signal communications and a PBX  
interface coupled to said private-branch exchange for  
telephone communications between stations;

wherein said processor of said central station  
20 facilitates said visual and data signal communications  
between said at least one patient station, and said at least  
one control station, and determines which of said at least  
one patient station or said at least one control station is  
transmitting said visual and data signals and which of said  
25 stations are to receive said visual and data signals, and  
establishes a communication link between said transmitting  
stations and said receiving stations.

21. The patient care and communication system  
30 according to claim 20 further comprising at least one staff  
station having a processor which facilitates visual and data  
signal communications relating to patient care, a display  
for displaying text received from said data signal

communications and telephone circuitry coupled to said  
1 private-branch exchange for telephone communication between  
stations.

22. A patient care and communication system which  
comprises:

5 a central station having means for facilitating  
visual and data communications relating to patient care; and  
a plurality of remote stations linked to said  
central station and having processing means for facilitating  
visual and data communications relating to patient care and  
10 having display means for displaying said visual  
communications, each of said plurality of remote stations  
includes a receiver adapted to receive transmitted signals  
for data communication to said central station;

15 a private branch exchange connected to a telephone  
exchange and to a plurality of telephones for facilitating  
telephone communication between said telephones and said  
exchange;

wherein each of said plurality of remote stations  
includes telephone circuitry connected to said private-  
20 branch exchange for telephone communications therebetween;  
and

at least one portable transmitter adapted to be  
worn by personnel in a facility, said transmitter being  
adapted for transmission of signals including the identity  
25 of the personnel;

wherein said central station includes means for  
determining the identity and location of the personnel  
associated with said at least one transmitter in response to  
said transmitted signals.  
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23. The patient care and communication system  
1 according to claim 22, wherein said central station  
facilitates said visual and data communications, including  
said received transmitted signals, between said plurality of  
remote stations, and includes means for determining which of  
5 said plurality of remote stations are transmitting said  
visual and data communications and for establishing a  
communication link between a transmitting remote station and  
a remote station in the determined location of the person.

24. A method of providing patient care and  
10 communication between patient rooms and nurse stations in a  
health care facility comprising:

connecting a plurality of remote stations to a  
central processor so as to facilitate visual and data  
communications therebetween, said plurality of remote  
15 stations having processing means for facilitating said  
visual and data communications and having display means for  
displaying said visual communications, and said central  
processor having means for determining which of said  
plurality of remote stations are transmitting said visual  
20 and data communications and which of said plurality of  
remote stations are to receive said visual and data  
communications, and having means for establishing a  
communication link between said transmitting stations and  
said receiving stations;

25 connecting said plurality of remote stations and  
said central processor to a private-branch exchange for  
audio communications between said stations.

positioning at least one of said plurality of  
remote stations in each patient room located within the  
30 health care facility;

1 positioning at least one of said plurality of  
remote stations in each nurse station of said health care  
facility;

attending said remote station in each nurse  
station to receive said visual and data signals from said  
5 central processor and audio signals from said private-branch  
exchange; and

responding to said audio, visual and data signals.

25. Apparatus for remotely controlling  
environmental facilities within a room of a health care  
10 facility, which comprises:

a wireless receiver positioned within said room  
having environmental facilities therewithin;

a wireless transmitter located within said room,  
said wireless transmitter having a housing, a processor  
15 within said housing and a patient select member connected to  
said processor, such that activation of said patient select  
member causes said wireless transmitter to transmit control  
data to said wireless receiver; and

a controller connected to said wireless receiver  
20 and said environmental facilities, said controller being  
configured to receive said control data from said wireless  
receiver and to control said environmental facilities in  
response to said control data.

26. The apparatus according to claim 25, wherein  
25 said environmental facilities include a thermostat.

27. The apparatus according to claim 26, wherein  
said thermostat is portable and includes a wireless  
transmitter to transmit temperature data to said controller  
30 to permit the controller to regulate ambient temperature  
within said room.



1           28. The apparatus according to claim 25, wherein  
said wireless receiver comprises an infrared receiver and  
said wireless transmitter comprises an infrared transmitter.

5           29. The apparatus according to claim 25, wherein  
said wireless transmitter includes a connector which  
facilitates connection of said wireless transmitter to  
medical equipment, reception of status data from said  
medical equipment and transmission of said status data to  
said wireless receiver.

10          30. A method for controlling environmental  
facilities within rooms of a health care facility,  
comprising:

            positioning a wireless receiver within rooms  
having environmental facilities therewithin;

15          positioning a portable wireless transmitter within  
the rooms;

            connecting said wireless receiver and said  
environmental facilities to a controller, said controller  
being configured to receive control data from said wireless  
20          receiver and to control said environmental facilities in  
response to said control data; and

            activating said wireless transmitter to transmit  
said control data.

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